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Abstract

The implementation of corporate social responsibility (CSR) is crucial for the legitimacy of an organization in today's globalized economy. This study aims to enrich our knowledge of the implementation of the largest voluntary CSR initiative—the UN Global Compact (UNGC). Drawing on insights from stakeholder, network, and institutional theory, I derive a positive impact of UNGC participation duration on the implementation level of the UNGC principles, despite potential weaknesses in the initiative's accountability structure. Moreover, I scrutinize the validity of the newly introduced UNGC “Differentiation Programme” before applying this framework in the empirical analysis. Results from ordinal, linear, and instrumental variable regression models suggest that, contrary to claims made by UNGC critics, the duration of UNGC participation does affect the level of UNGC implementation. However, this effect appears to be much smaller than previous practitioner studies have suggested. Moreover, strong local UNGC networks affect the implementation level of the UNGC positively. Their hypothesized moderating role between UNGC participation duration and

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UNGC implementation level, however, is only significant in networks with activities of high quality rather than high quantity.

Keywords

corporate social responsibility, Differentiation Programme, implementation, UN Global Compact

Corporate social responsibility (CSR) has gained such prominence in organizational theory and practice (De Bakker, Groenewegen, & Den Hond, 2005; Economist, 2005; Margolis & Walsh, 2003) that its organizational implementation has grown into one of the key challenges that organizations face (Gilbert & Rasche, 2008; Knudsen, 2011; Maon, Lindgreen, & Swaen, 2009). In the process of globalization, many companies extended their operations across national borders and, in certain cases, even came to hold greater economic and social power than some governments (Beck & Camiller, 2000). With the development of global exchange, the causes and effects of socio-environmental problems, such as corruption, human rights violations, and global warming, have also expanded transnationally. The regulatory power of national governmental agencies to address transnational social and environmental challenges is eroding and has shifted to multiple actors including multinational corporations (MNCs; Campbell, 2007; Fransen & Burgoon, 2014; Scherer, Palazzo, & Baumann, 2006). Pressures for MNCs to take on a political role are real, as industry leaders such as Nike, Exxon, Nestlé, and Pfizer can attest (Maon et al., 2009; Matten & Crane, 2005; Vogel, 2010).

Social accountability initiatives such as the UN Global Compact (UNGC), the SA 8000 social accountability standard, and the ISO 26000 CSR standard offer businesses means of complementing legislation to adequately address social, environmental, and anti-corruption issues (Christmann & Taylor, 2006; Rasche, Waddock, & McIntosh, 2013; Vogel, 2010). The UNGC is the most prominent voluntary CSR initiative worldwide; participants commit to 10 universal principles in the areas of human rights, labor standards, the environment, and anti-corruption (UNGC, 2012b). The overarching goal of the initiative is to serve as a long-term CSR learning platform (Kell & Levin, 2003; Palazzo & Scherer, 2010; Rasche, 2009). "Learning" in this article refers to a participant's progress regarding "the development, implementation, and disclosure of sustainability policies and practices" (UNGC, 2012a) in the context of the 10 principles. Broadly speaking, organizational learning can be defined as the institutionalization of new organizational structures, routines, or strategies that lead to changes in action (Kell & Levin, 2003; Levitt & March, 1988).

To date, however, scholars have conducted little empirical research on the impact of the UNGC, despite the potential significance of such an initiative for the corporate world (Christmann & Taylor, 2006; Maon et al., 2009; Margolis & Walsh, 2003; Runhaar & Lafferty, 2009). Of the studies addressing the impact of the UNGC empirically, many have focused on differences between participants and nonparticipants (Bernhagen & Mitchell, 2010; Mwangi, Rieth, & Schmitz, 2013). I will outline potential limitations of such a focus by highlighting that firms may nonrandomly opt into one of the two groups, and argue why it is important to conduct more research focusing on the impact of the UNGC among its participants. Furthermore, considering the varying scope and measurement techniques in existing studies, it does not appear surprising that findings with regard to the impact of UNGC participation on business practices are mixed (Rasche et al., 2013). Some studies are based on only a few companies (Baumann-Pauly & Scherer, 2013; Rieth, 2009; Runhaar & Lafferty, 2009) or a single country (Berliner & Prakash, 2015; Hamann, Sinha, Kapfudzaruwa, & Schild, 2009), whereas others examine particular CSR policies whose implementation is not directly tied to the UNGC principles (Bernhagen & Mitchell, 2010).

While practitioner studies offer first quantitative insights on the impact among participants, the self-assessments of the respondents are not based on explicit implementation criteria (McKinsey, 2007; UNGC, 2012c). Their results suggest that UNGC participation duration has a high positive impact on the implementation of the 10 principles; critics, however, continue to reject this conclusion (Deva, 2006; Sethi & Schepers, 2014). Some even argue that “all credible and publicly available data and documentation conclusively demonstrate that the UNGC has failed to induce its signatory companies to enhance their CSR efforts and integrate the 10 principles in their policies and operations” (Sethi & Schepers, 2014, p. 193).

The aim of the present work is thus to enrich our knowledge on whether the Global Compact has an impact among its business participants as regards the implementation of its principles over the duration of participation. The newly introduced UNGC “Differentiation Programme” thereby offers, for the first time, a comprehensive framework providing three different levels of UNGC implementation: “Learner Platform” (Learner), “GC Active” (Active), and “GC Advanced” (Advanced). Launched in February 2011, this program prescribes that its participants assess their UNGC implementation by choosing one of these three levels based on a set of predefined criteria. I use this measure as dependent variable (DV) in my empirical analyses, and provide insights on its validity in the online appendix.

As UNGC participants, companies have the obligation to communicate with their stakeholders on a regular basis. Furthermore, they have the possibility to collaborate with them in the course of various UNGC network events.

Stakeholder theory (Donaldson & Preston, 1995; Freeman, 1984; Jones, 1995) suggests that managing stakeholder relationships in such a manner has an impact on organizational practices. Beyond global coordination with stakeholders, scholars have argued about the importance of strong local stakeholder networks to generate desired outcomes (Rasche, 2012; Vormedal, 2005). Critics, however, point to the initiative's lack of accountability mechanisms and of guidance on how the principles should be implemented (Hemphill, 2005; Williams, 2004). They argue that companies with a poor reputation may simply choose to join the UNGC without intending to actually implement its principles in their organizational structures, assuming that the mere association with the United Nations allows them to create a positive image. In allusion to the blue UN flag, this practice is derogatorily referred to as "bluewashing" (Knudsen, 2011, p. 334).

To contribute to the controversial debate on whether the UNGC has an impact on its business participants, despite the lack of stringent accountability mechanisms, the central research question this study seeks to address can be stated as follows:

Research Question: Does longer UNGC participation duration lead to higher levels of UNGC implementation?

To answer this question, I apply multiple analytical approaches including ordinal and linear regression analyses. In addition, instrumental variable (IV) models address the concern that companies participating in the UNGC may not simply be comparable with nonparticipants due to their potentially different predispositions with regard to various CSR implementation trends (Berliner & Prakash, 2015). Contrary to claims by UNGC critics (Sethi & Schepers, 2014), my findings suggest that the duration of UNGC participation does affect the level of UNGC implementation. However, this effect seems to be much smaller than previous practitioner studies suggested. Moreover, strong local UNGC networks affect the implementation level of the UNGC positively. Their hypothesized moderating role between UNGC participation duration and UNGC implementation level, however, is only significant in networks with activities of high quality rather than high quantity; that is, only high quality networks affect older UNGC business participants more (positively) than younger ones. Finally, firm size and public ownership seem to be the strongest drivers for UNGC implementation.

Implementing CSR in the UNGC: Theory and Empirical Evidence

For a long time, the literature on CSR mainly concentrated on whether CSR is good for profits (Margolis & Walsh, 2003; Pelozo, 2009). Most studies

treated CSR as a “black box” (independent variable), and only 15% treated it as the DV (Margolis & Walsh, 2003). Consequently, there was little research on how companies implement CSR (Christmann & Taylor, 2006; Rasche, 2009).

Over the last years, however, social accountability initiatives such as the UNGC, the SA 8000, or ISO 26000 standard were instituted to offer businesses the means and guidance to address social, environmental, and anti-corruption issues in the absence of a legally binding global governance system (Christmann & Taylor, 2006; Rasche et al., 2013; Waddock, 2008). The effectiveness of such initiatives has been a subject of interest in the recent literature (Christmann & Taylor, 2006; Maon et al., 2009; O’Rourke, 2003; Runhaar & Lafferty, 2009). Although there is some evidence that under certain conditions, international certifiable standards, such as the ISO 9000 general management or the ISO 14001 environmental management standard, influence organizational practices (Christmann & Taylor, 2006; Potoski & Prakash, 2005), studies on the effectiveness of global standards covering a comprehensive spectrum of CSR issues, such as the UNGC, are so far scarce. Moreover, many existing studies on the impact of the UNGC or other voluntary sustainability initiatives focus on comparisons between participants and nonparticipants. For example, Bernhagen and Mitchell (2010) compared the likelihood of having internal human rights policies between UNGC participants and nonparticipants based on a sample of the largest 2000 companies worldwide. In a similar vein, Mwangi et al. (2013) compared the application of sustainability reporting standards between UNGC participants and nonparticipants in a sample of the world’s largest automotive and utility companies.

However, caution is necessary when assessing the impact of the UNGC by comparing the performance differences between participants and nonparticipants for at least three related reasons. First, such analyses may not fully recognize that the UNGC constitutes a learning platform rather than a certification or performance standard, and thus insufficiently address time-related effects such as the duration of participation. Second, it is to note that the key mission of such an initiative is not to gather a group of participants that outperforms nonparticipants but to stimulate progress among its participants, which may deliberately include those that urgently need CSR guidance (Kell & Levin, 2003; Palazzo & Scherer, 2010; Rasche, 2009). As Georg Kell has specified in a 2010 interview, “we have always kept the GC’s entry barrier intentionally low, so that those that face serious challenges can join the conversation, learn from others and improve” (Berliner & Prakash, 2015, p. 120). Put differently, the effort of the UNGC to get also “poor performers” on board implies that the initiative can have a “positive impact” on its participants even if assessments reveal that participants fare worse than nonparticipants. Third, the applied methodological approaches in existing studies might

have fallen short of accurately capturing inherent challenges when comparing UNGC participants and nonparticipants. Until the recent study by Berliner and Prakash (2015), empirical UNGC analyses neglected that firms may non-randomly opt into the group of UNGC participants, versus nonparticipants, due to independent firm tendencies toward different CSR trends over time between the two groups. It follows from these considerations that to analyze the impact of the UNGC, it is of crucial importance to (a) fully understand and adequately assess the drivers of UNGC implementation among its participants taking into account their duration of participation and (b) apply elaborate analytical approaches addressing nonrandom selection issues when comparing UNGC participants and nonparticipants.

Initiated by Kofi Annan at the World Economic Forum in 1999 and formally launched in July 2000, the UNGC spans the whole spectrum of CSR issues. Its principles range from human rights and labor standards to environmental and anti-corruption (added in 2004) issues, which are all derived from key international declarations (UNGC, 2012b). The UNGC soon evolved into the largest and arguably most ambitious voluntary CSR initiative in the world (Hemphill, 2005; Rasche, 2009; Vormedal, 2005) and currently comprises 8,322 business participants (as of April 29, 2015). The primary goal of the initiative is to provide participants with the resources and expertise needed to help them implement the 10 UNGC principles. Several scholars refer to the UNGC as a comprehensive initiative capturing an extended concept of corporate responsibilities applicable in today's globalized economy, where state actors increasingly lose control over transnational corporate activities (Matten & Crane, 2005; Scherer et al., 2006).

Since its foundation, the scheme has received both a great deal of support and criticism. One major criticism leveled at the UNGC (Hemphill, 2005; Rasche, 2009; Williams, 2004) is that the compact's principles are vague, and thus hard to implement. Deva (2006) points out that the UNGC principles provide companies with little concrete guidance on the conduct that is expected from them. Another common criticism is that companies simply join the UNGC to benefit from the UN's reputation without intending to improve the implementation of the UNGC principles (Deva, 2006; Rasche et al., 2013; Williams, 2004). Consequently, critics such as Sethi and Schepers (2014, p. 193) claim that, due to the design of the initiative lacking stringent enforcement mechanisms such as independent monitoring, the UNGC has failed to generate enhancements of business participants' integration of the UNGC principles. Deva (2006) seems to have similar concerns: "Dialogue with business is a central tool of the Global Compact in ensuring respect for its principles, but it is doubtful if the means employed could achieve the ends" (p. 146). Similarly, critics from civil society "have questioned claims

that the Compact shapes members' human rights and environmental performance, or that its program design can create incentives toward this outcome" (Berliner & Prakash, 2015, p. 121).

Since the introduction of the compulsory "Communication on Progress" (COP) policy in 2003, corporations have to report annually on the progress they have made in implementing the 10 principles. In 2005, the UNGC also started to publicly "delist" participants who fail to comply with the COP policy. However, for a long time, this policy lacked standardized criteria for evaluating the progress of participants, as well as incentives for stricter implementation. Participants were able to highlight just one CSR issue where their record of progress was excellent and conceal other issues where the record was poorer (Williams, 2004). To react to this issue, the UNGC introduced the "Differentiation Programme" in February 2011, prescribing for the first time that its participants must choose among different levels of UNGC implementation criteria. It is now no longer possible for participants (above the lowest level of UNGC implementation) to conceal issues where implementation is poor. Many critical studies on voluntary CSR standards such as the UNGC tend to apply a static perspective (Behnam & MacLean, 2011; Deva, 2006; Wijen, 2014), that is, they underestimate the potential that structures, processes, and guidance of such standards may be refined and developed over time. In contrast, by subsequently adding principles (P10 on anti-corruption in 2004), introducing and refining the COP policy (in 2003 and 2005, respectively), and providing clearer implementation guidance through the "Differentiation Programme" (in 2011), the UNGC illustrates the evolutionary character of voluntary CSR initiatives.

In sum, the literature review revealed that global quantitative insights on the effectiveness of initiatives such as the UNGC, based on measures with criteria directly tied to all of the initiative's principles, are urgently needed. Moreover, recent developments appear to be insufficiently addressed by previous studies taking a rather static perspective on the UNGC and CSR standards in general. All together, this calls for comprehensive and updated analyses on the impact of the UNGC. In particular, one crucial question regarding the impact of the UNGC on its participants remains to be answered: Compared with the newer participants, have the older participants learned to better implement the UNGC principles?

Berliner and Prakash (2015) have significantly enriched our knowledge of CSR implementation among and between (non)participants and guide the way for future empirical analyses. Their work focused in particular on environmental and human rights ratings of U.S. firms and was hence—like other studies—not designed to cover the full spectrum of UNGC principles (see also Bernhagen & Mitchell, 2010; Perez-Batres, Miller, & Pisani, 2011) and

the global dimension of the initiative (Mwangi et al., 2013; Rieth, 2009). The aim of this study is hence to contribute to this literature by drawing on a large set of companies and countries worldwide and applying the newly available “Differentiation Programme” framework, directly tailored to assess UNGC implementation.

Hypotheses Development

This study focuses on one type of organizational mechanisms potentially driving the level of UNGC implementation: learning among UNGC participants through stakeholder interaction, dialogue, and networking. Acknowledging further down that a great variety of other organizational mechanisms exist that may enhance UNGC implementation efforts, I chose this focus deliberately as the learning mechanism constitutes the core essence and mission of the UNGC (Kell & Levin, 2003). Consequently, I only consider the particular features of the initiative that are exclusively available to its participants to derive the “net” impact of the UNGC on the organizational practices among its business participants. In fact, the only feature exclusively available to UNGC participants is its learning and network structure. Business participants are linked with peers, governments, civil society organizations, and labor through three engagement mechanisms: learning events, dialogue events, and partnership projects (see Palazzo & Scherer, 2010; Rasche, 2009; Williams, 2004).

Several models on learning processes in the context of CSR integration have been developed, the most prominent of which is arguably Zadek’s (2004) model on Nike. Research suggests that there is not a single “best way” to manage organizational change and has so far failed to develop a universally accepted theory of organizational learning; however, it is agreed that learning occurs over a period of time (Crossan, Maurer, & White, 2011). Moreover, according to a recent CSR implementation framework synthesizing existing CSR implementation process studies, there seems to be one central means of achieving learning that underpins every step of CSR implementation: “continuous stakeholder dialogue” (Maon et al., 2009).

Considering the clear focus of the UNGC on achieving learning through networking and dialogue with stakeholders, I draw on insights from stakeholder theory to hypothesize on the impact of the UNGC on its business participants. Stakeholders are commonly defined as those “groups or individuals who can affect, or are affected by, the achievement of an organization’s mission” (Freeman, 1984, p. 54). Stakeholders are the central actors that produce accountability standards such as the UNGC, as NGOs do, or benefit from their implementation, as employees do, and shape the discussion on how standards

are put into practice (Gilbert & Rasche, 2008). Certain types of CSR can be perceived as manifestations of attempts to establish trusting, cooperative relationships between businesses and stakeholders (Jones, 1995). Scholars widely agree that the interaction between firms and stakeholders is a driver for UNGC implementation or CSR in general (Campbell, 2007, p. 962; Mwangi et al., 2013). Burnes (2004) argues that learning about stakeholder expectations and the context in which they operate helps design the appropriate mechanisms for positive organizational change.

Applied to the UNGC, sharing best practices and following notable examples of other UNGC participants, such as businesses from the same industrial sector or region, appears crucial for learning (Kell & Levin, 2003; Rasche, 2009). At the global level, the online Learning Forum is one example of a UNGC learning mechanism. It is a database inviting participants to share good practice cases and learn from other organizations' experience in implementing the 10 principles through the GC web portal; the goal is to form a knowledge platform that integrates the views of all relevant stakeholders, and at the same time increases the transparency of participants' activities (Kell & Levin, 2003; Vormedal, 2005). Moreover, participants can meet in person at the annual international learning forum conferences to share best practices and discuss experiences of working with the UNGC or attend global issue-specific multi-stakeholder dialogues, so-called global "policy dialogues," to discuss contemporary challenges of globalization and corporate responsibility (Rasche, 2009; Vormedal, 2005). Taken together, we may expect that firms that have engaged more with stakeholders in the context of these UNGC engagement mechanisms have also learned to better implement the UNGC principles compared with firms that exhibit a lower level of engagement.

The annual Global Compact Implementation Survey, the 2011 version comprising 1,325 companies from more than 100 countries, suggests a strong relationship between the length of UNGC participation and the degree of engagement with UNGC stakeholders. "Companies that have been in the Global Compact the longest are significantly more likely to partner with the UN—60% of early joiners versus 25% of recent joiners" (UNGC, 2012c, p. 22). The results of another study suggest "that companies that have participated many years in the GC, have submitted the most projects and have attended the most GC meetings" (Cetindamar & Husoy, 2007, p. 163). With regard to learning or implementation progress made by UNGC participants, reports by the UNGC (2011b) itself as well as by the consultancy firm McKinsey (2007) suggest that learning indeed does occur among UNGC participants. However, the responses are not tied to any predefined set of implementation criteria and results may suffer from several biases, as I will outline in the "Data and Method" section.

Combining (a) the presented arguments on the impact of stakeholder engagement on the implementation of the UNGC and (b) the strong relationship between the length of UNGC participation and the likelihood to engage and partner with UNGC stakeholders, I hypothesize the following:

Hypothesis 1a (H1a): The longer a company has been a participant in the UNGC, the higher the degree of UNGC implementation.

Learning in the UNGC is not only meant to occur at the global level, but also at the local level (Kell & Levin, 2003; Rasche, 2009). Most notably, the UNGC supports the proliferation of “local UNGC networks” at the regional or country level (Rasche, 2012; Vormedal, 2005). “Their role is to facilitate the progress of companies [engaged in the Compact] in implementing the ten principles”, while also creating opportunities for multi-stakeholder engagement and collective action (Gilbert & Behnam, 2013, p. 141; see also UNGC, 2014; Williams, 2004). Some scholars even argue that “membership in the GC alone is unlikely to move a company in significant ways toward progressive implementation of the core GC principles,” but that “the existence of active regional and local GC networks is a crucial ingredient for setting in motion specific mechanisms, such as peer learning and capacity building, that can contribute effectively to improved performance of individual member companies” (Mwangi et al., 2013, p. 204; see also Gilbert, 2010).

Organizational learning literature defines such a setting where groups of legally autonomous organizations engage and cooperate with each other as “interorganizational network” (Knight, 2002). Research on the ecology of learning organizations (Levitt & March, 1988), interpartner learning in strategic alliances (Hamel, 1991), and interorganizational learning (Knight, 2002; Larsson, Bengtsson, Henriksson, & Sparks, 1998) discuss the benefits and difficulties of such networks with regard to organizational outcomes. Aspects such as power, opportunism, suspicion, and asymmetric learning strategies have been identified as barriers to organizational learning in networks (Hamel, 1991; Larsson et al., 1998). In contrast, long-term oriented networks allowing for dynamic processes and repeated interactions of participants over time, as well as high learning stakes and trust, empower interorganizational learning processes (Crossan, Lane, & White, 1999; Larsson et al., 1998).

We have general indications that certain local networks have been attended regularly and that participants perceive the meetings as fruitful thanks to the more intense and small-scale interactions that allowed them to learn from one another’s experiences (see survey by Vormedal, 2005). This survey thereby illustrates (a) the long-term orientation of local UNGC networks allowing for

repeated interactions among participants and (b) an intense interaction and general positive participant feedback suggesting a general atmosphere of transparency and trust instead of opportunism and suspicion. More generally, considering that the 10 UNGC principles are not directly tied to the core tasks of a business firm (Bromley & Powell, 2012), competitive and opportunistic considerations such as exploiting power imbalances or withholding information may not play as central a role in voluntary CSR networks. Consequently, the benefits of interacting with stakeholders in local UNGC networks seem to outweigh potential barriers with respect to achieving organizational learning outcomes.

As regards empirical evidence of local UNGC networking, the 2011 UNGC implementation survey concludes that “[c]ompanies that have participated in the Global Compact the longest are more likely to engage locally” (UNGC, 2012c, p. 25). Yet, we also know that local UNGC networks vary significantly as regards annual activities, type of stakeholder inclusion, and years of existence if at all established (Rasche, 2012; UNGC, 2010). In line with first qualitative empirical analyses (Mwangi et al., 2013) based on two local networks, the German and Australian UNGC network, we may expect a higher impact of the UNGC on business routines in countries with strong UNGC networks. Building on the arguments underlying H1a and having analyzed the benefits and barriers of interorganizational learning in local UNGC networks, I further hypothesize the following:

Hypothesis 1b (H1b): Strong local networks positively affect the relationship between the duration of UNGC participation and the level of UNGC implementation.

Figure 1 illustrates the hypothesized impact of UNGC participation duration on the level of UNGC implementation (H1a) together with the suggested moderating effect of active long-established local networks of this relationship (H1b). Following the CSR literature, this model also includes more general determinants of UNGC implementation (control variables; described in the “Data and Method” section).

Data and Method

The main data source for this study is the *UNGC Business Participant Database*. My data set comprises all UNGC business participants that submitted a COP between the introduction of the “Differentiation Programme” on February 1, 2011, and November 29, 2011. After merging and eliminating

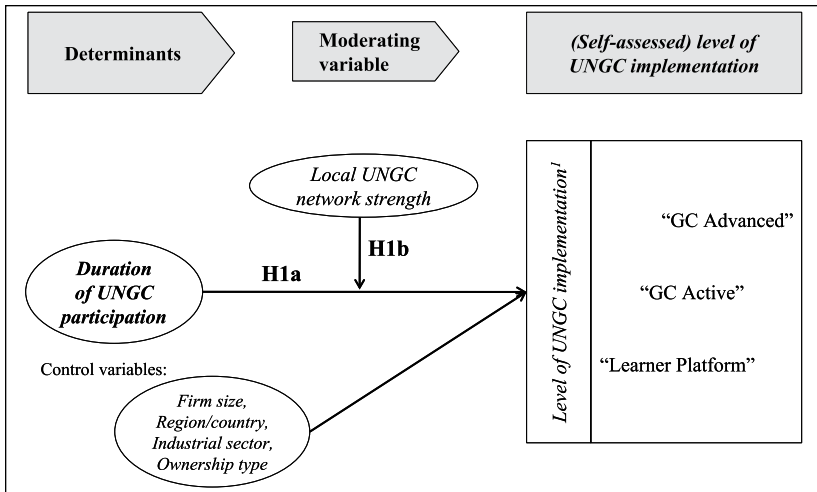


Figure 1. Model of UNGC implementation.

Note. UNGC = UN Global Compact.

incomplete, duplicate, or otherwise unusable data, the final data set consisted of 2,280¹ UNGC business participants.

The date of data collection was deliberately chosen, because companies can assign themselves the lowest level of UNGC implementation—Learner—only once and only for the period of 12 months, after which they must either proceed to a higher level of implementation or leave the UNGC. This means that data on implementation levels collected after February 1, 2012 (i.e., more than 12 months after the beginning of the “Differentiation Programme”) would suffer from a strong self-selection bias, because companies that classified as Learner in the first year of the “Differentiation Programme” and did not assess any progress in implementation during that year would be excluded from the initiative. Recognizing that prior to February 1, 2012, no such formal pressure to make implementation progress in the UNGC existed, the risk that my data set suffers significantly from a self-selection bias appears comparatively low.

DV

Level of UNGC implementation. The newly introduced UNGC “Differentiation Programme” provides, for the first time, a comprehensive measure allowing for a differentiated analysis of UNGC implementation levels among participants

worldwide. The three levels of implementation according to this program are “Learner,” “Active,” and “Advanced.” In both the Advanced and the Active level (see UNGC, 2012d), it is no longer possible for participants to highlight just one issue where implementation is good, while concealing others where implementation is poor. Companies have to report on each issue (human rights, labor, environment, and anti-corruption) separately. On the Advanced level, there are 24 detailed criteria that companies have to meet in their annual COP reports. A criterion is considered met when a company communicates that it has implemented, or is in the process of implementing, one or more of the commonly accepted best practices associated with that criterion (see the online appendix). For example, the German MNC Daimler AG—one of the first signatories of the UNGC since its foundation in 2000—assessed its level of UNGC implementation in its 2011 COP as Advanced. The COP of the automobile manufacturer fulfills all the 24 Advanced criteria covering all four UNGC issues, and even each of the suggested best practices of the criteria addressing the UNGC issues: labor, environment, and anti-corruption. As another example, the 2011 COP of the French automotive firm Valeo indicates an implementation of the UNGC at the Learner level. The COP of the UNGC participant having joined the initiative in March 2004 does not describe actions or policies related to the anti-corruption issue and lacks a CEO statement of continued UNGC support; both aspects are mandatory at the Active level.

My analysis based on this three-level measure complements our empirical knowledge in two ways. On one hand, while relying on participant declarations—like most, if not all, measures of CSR implementation in large quantitative studies—it avoids asking participants about any type of perceived implementation progress as done in other studies. For example, response categories such as “Advancement would not have happened otherwise” or “Significantly helped” (see UNGC, 2012c, p. 10) are not tied to any criteria. Therefore, they may be particularly prone to a social desirability bias, that is, “systematic error in self-report measures resulting from the desire of respondents to avoid embarrassment and project a favorable image to others” (Fisher, 1993, p. 303; see also Crane, 1999). Instead, I derive my conclusions on UNGC accomplishments by confronting the self-assessed UNGC implementation levels with the objectively observable measure “duration” of UNGC participation. On the other hand, this assessment is mandatory for every participant and as such does not suffer from selection biases within the group of UNGC participants. Other sorts of selection biases, that is, selection of (longer) UNGC participation, are addressed further down. Furthermore, I provide theoretical and empirical analyses allowing for insights on the validity of this UNGC implementation measure—as regards both its “content” and its “construct”—in the online appendix.

Independent Variables

Duration of UNGC Participation. To analyze the effect of the duration of participation on the level of UNGC implementation, I calculated the days between the *date of UNGC entry* and the *date of COP submission* indicating the level of UNGC implementation (DV). I then divided the total days of that period by 365 to obtain the effect of duration of participation in years.

Local UNGC network strength (moderating variable). To analyze how local UNGC networks influence, that is moderate, the relationship between UNGC participation duration and the level of UNGC implementation, I first identified several criteria that may help indicate the strength of a local network. On one hand, I included quantitative criteria: the quantity of network activities in the two years ([a] 2009 and [b] 2010) prior to the year the UNGC implementation level was assessed, and (c) the duration of network establishment in years. On the other hand, I considered (d) the quality of a network by assessing whether a “Best Practice” was identified in that network according to the UNGC Local Network Report referring to data from 2010 (UNGC, 2011a). The type and range of identified local network best practices corresponds well with previously identified mechanisms for stimulating learning among UNGC participants (Kell & Levin, 2003; Palazzo & Scherer, 2010; Rasche, 2009): The networks of Colombia, Germany, Netherlands, and Vietnam developed practical guides and tools for assessing and improving the organizational implementation of the 10 principles; Serbia and Spain focusing exclusively on corruption. UNGC networks of Indonesia, Italy, Korea, United Kingdom, Moldova, and Sri Lanka were identified due to their collection, publication, and communication of notable examples of other UNGC business participants from the same network. Furthermore, UNGC networks of Kenya and Paraguay obtained a best practice “distinction” because of their in-depth training sessions and workshops aimed at clarifying the 10 UNGC principles, reviewing company strategies, and boosting UNGC implementation.

Finally, I contacted a UNGC expert who has worked for and researched on the initiative, to provide me with (e) a list of networks that he considers “strong.” To demonstrate the robustness of and/or detect potential variations in obtained results concerning the local network effect, I constructed a series of alternative measures that rely on all the above criteria, a subgroup thereof, or single (quantitative vs. qualitative) criteria. The moderator analysis below includes a detailed description of the different applied measures and a list of countries fulfilling the respective criterion.

Control Variables

According to CSR research, most of the drivers for CSR implementation, or UNGC implementation in particular, relate to the visibility and the resources

of the firm, as well as the institutional background against which the CSR engagement takes place (Campbell, 2007; Mitchell, Agle, & Wood, 1997). Institutional perspectives on CSR suggest that firms form relevant decisions by drawing on the prevailing norms and benchmarks that are available in a broader social context (Campbell, 2007). To maintain a manageable scope, I use these variables as controls without further specifying their potential impact on UNGC implementation.

Firm size. The increasing scope and economic interdependence of many corporations, generally resulting in higher visibility of the firms, appears to be an important driver for firms to adopt CSR initiatives (Vogel, 2010). Previous empirical results suggest that bigger firms are more likely to join the UNGC (Bennie, Bernhagen, & Mitchell, 2007); so far there are no results on whether they are also better implementers. I used the number of employees as a measure of *firm size*. The respective analysis in my sample revealed that the presence of several very large firms leads to a positively skewed distribution. After a natural logarithm (ln) transformation was applied to the number of employees, the distribution resembled a normal distribution. Thus, *firm size* is represented here by the ln-transformed number of employees.

Country/region. Certain national institutional conditions, such as strong and effectively enforced state regulation as well as the presence of strong trade associations or employee associations, promote corporate socially responsible behavior (Campbell, 2007). To reduce the number of (dummy) variables, I grouped countries into *regions* in many models. If the company is located in *Western Europe* for example, its value is 1 for this region dummy and 0 for all others. On the country level, *United States of America* has been omitted as dummy in the analyses and serves as a reference point for a typical liberal market economy, to which more coordinated market countries can be compared. On the regional level, Africa constitutes the reference point against which other regions can be compared. The regional categorization is based on the composition of macro geographical (continental) regions and geographical sub-regions provided by the UN Statistics Division. In addition, Caribbean and Central American companies have been grouped together into Central America, whereas the regional dummy MENA represents countries in the Middle East and North Africa.

Industrial sector. Considering that the main challenges companies within the same industrial sector face are similar, their approaches to CSR may also be similar. The boundaries of different industrial sectors can thus be taken to represent the boundaries of different institutional fields (DiMaggio & Powell, 1983). I grouped the various *sectors* as presented in the data set obtained

from the UNGC into 19 “*supersectors*,” following the Industry Categorization Benchmark (ICB), 2011.

Ownership type. Previous studies on the UNGC (2011b) or CSR in general (Atkinson & Galaskiewicz, 1988; Graves & Waddock, 1994; Johnson & Greening, 1999) suggest that a company’s ownership structure may be another determinant in the adoption of CSR practices. Different types of ownership are also related to a firm’s level of visibility and scrutiny, especially as regards private versus public ownership (Baker, 2010), and may therefore influence the degree of UNGC implementation as well. I used four different categories of business ownership (*public, private, state-owned, subsidiary*) as dummy variables in all analyses.

Analytical Approaches

I test my hypotheses across a range of models, that is, ordered logit and probit versus ordinary least squares (OLS) regression, incorporating different assumptions regarding the underlying distribution and/or nature of the DV. First, to closely adhere to the ordinal nature of the DV “UNGC implementation,” ordered logit and probit models appear most appropriate. These models take the ceiling and floor effects into account and avoid potential distortions resulting from subjectively assigned scores to the three UNGC differentiation levels (Hanushek & Jackson, 1977).

In the ordered logit and probit models, the ordinal DV y is viewed as a discrete realization of an underlying latent variable y^* , which is unobservable. The categories of variable y are contiguous intervals on the continuous scale of variable y^* . Whereas the unobservable y^* would satisfy the linear regression model $y_i^* = x_i'\beta + u_i$ (x being the covariate vector, β the vector of regression coefficients, and u the error term), the observable y is assumed to arise from y^* as follows: $y_i = j$ if $\alpha_{j-1} < y_i^* \leq \alpha_j$ (the α s representing unknown cutpoints, category boundaries, in the distribution of y^* ; Lu, 1999). The ordered logit and ordered probit models differ in the underlying distribution. For the (ordered) logit, the distribution F is the logistic cumulative distribution function (cdf) $F(z) = \exp(z)/[1 + \exp(z)]$, whereas for the (ordered) probit, F is the standard normal cdf (Wooldridge, 2012). My empirical analyses revealed that the effects in the ordered logit models are very similar to the ones in the ordered probit models. I will only report the results of the latter (Table 2, Models 1 to 3, and Table 5) due to their slightly higher predictive precision compared with the ordered logit models. To interpret the size of effects in ordered probit (and logit) models, we need to look at the marginal effects. The following formula outlines the marginal effect of an increase in

regressor x_r on the probability of falling into category j : $\partial p_{ij}/\partial x_{ri} = [F'(\alpha_{j-1} - x'_i\beta) - F'(\alpha_j - x'_i\beta)]\beta_r$. The sum of the marginal effects of each variable on the different categories is always zero.

In addition to the ordered probit models, I perform linear (OLS) regression analyses (Table 2, Models 4 to 6, and Table 4). This type of analysis allows for easier interpretability of the β coefficients. However, as the OLS model violates the ordinal-rank assumption of our DV y assuming an interval scale instead, results need to be interpreted with caution.

Finally, I controlled for the possibility that participation duration itself is nonrandom, that is that firms' opting (or "selecting") into participating longer in the UNGC as opposed to participating shorter or not at all may be driven by omitted variables. This potential selection problem has long been unaddressed in empirical work on the UNGC (Berliner & Prakash, 2015). Selection effects are present if firms that participate longer in the UNGC have independent tendencies toward different aspects in their social performance compared with firms that participate for a shorter period or not at all. I use the method of IVs, also referred to as two-stage least squares (2sls) analysis (Wooldridge, 2012), in a set of further linear models to solve the potential selection—endogeneity—problem, thereby assessing only the exogenous element of UNGC participation duration. A valid IV (instrument) is correlated with the potentially endogenous independent variable, but has no partial effect on the DV (when the potentially endogenous variable and omitted variables have been controlled for; Wooldridge, 2012). In other words, the instrument must predict UNGC participation duration of the firms in my data set, but must not influence their level of UNGC implementation.

I identify one variable that fulfills these conditions both theoretically and empirically: the average participation duration per sector of firms that have exited or been delisted from the UNGC. The theoretical intuition behind this instrument draws on arguments from the institutional isomorphism and policy diffusion literatures, stating that organizations tend to mimic the behavior of salient peer groups, for example, as regards decisions to participate in voluntary initiatives (Berliner & Prakash, 2015; DiMaggio & Powell, 1983; Simmons, Dobbin, & Garrett, 2006). Recent empirical UNGC literature suggests that a higher number of UNGC participants per sector increases the mimetic pressure on other firms in that sector to participate (Berliner & Prakash, 2015). Building on this argument, I expect that mimetic pressures not only apply for firms' decision to join but also to stay in the UNGC. That is, if firms in a given sector stay longer in voluntary initiatives, other firms in that sector may face mimetic pressures to stay longer as well. As the IV must only refer to actions of firms other than the reference firms, it only comprises former UNGC participants (as of November 29, 2011). Furthermore,

considering that reasons for leaving or being excluded from the UNGC appear to be so varied (see also Knudsen, 2011), a relation between the participation duration of exited participants and the level of UNGC implementation appears highly unlikely. Empirical tests support the strength of this IV. In the applied 2sls model including the IV, the Cragg-Donald F statistic as a test for the presence of weak instruments (i.e., that the equation is only weakly identified; Stock & Yogo, 2002) is far above a critical value. Running the reduced form IV regression, the Anderson canonical correlations likelihood-ratio test reveals that the instrument is highly relevant; that is, the IV affects the level of UNGC implementation through the presumed channel (UNGC participation duration).

In addition to these (2sls) IV estimation analyses, I apply yet another model addressing selection issues: the classic Heckman selection model (Heckman, 1979). This model predicts selection to a potentially endogenous treatment (UNGC participation duration) and then controls for unmodeled selection to treatment in predicting the DV (UNGC implementation; Antonakis, Bendahan, Jacquart, & Lalive, 2010). For this model to work, I need to consider both participants and nonparticipants to have nonrandom missing data with regard to the DV. As nonparticipants, I included a data set of 2,926 delisted UNGC business participants obtained at the same time as my main data set used in all other analyses so far (November 29, 2011). The total number of observations thereby amounted to 5,187. I controlled for unmodeled selection to "treatment" (i.e., UNGC participation duration) in predicting the DV by using the same instrument as in the IV model: average participation duration per sector of past UNGC business participants. Like with the OLS models, caution is necessary when interpreting the results, as the IV and Heckman models relax the ordinal-scale assumption of the DV, assuming an interval scale instead.

In all analyses, I ensure that standard errors are robust against heteroskedasticity (Breusch & Pagan, 1979), that is, that the possible presence of correlated or of not normally distributed residuals does not invalidate my statistical significance tests. I applied a robust variance estimator, typically referred to as Huber-White sandwich estimator (White, 1980), in all models. Models 2, 4, and 6 include the "strong local network" variable.

Results

Descriptive Observations

As displayed in part (a) of Table 1, almost a quarter (23%) of UNGC business participants implements the UNGC at the Learner level, the vast majority

Table 1. Descriptive Statistics.

(a) Tabulation of frequencies per level of UNGC implementation

Level of UNGC implementation	Frequency	%	Cumulated
Learner	663	23.62	23.62
Active	1,985	70.72	94.34
Advanced	159	5.66	100.00
Total	2,807	100.00	

(b) Correlation matrix

	i	ii	iii	iv	v	vi	vii	viii
i. UNGC implementation	1.000							
ii. Duration of participation	.151	1.000						
Local network strength ^a								
iii. Index 3	.055	.077	1.000					
iv. Index 5	.040	.093	.897	1.000				
v. Number of activities (in 2010)	-.012	.071	.702	.713	1.000			
vi. Best practice (in 2010)	.024	-.002	.219	.067	-.220	1.000		
vii. Instrumental variable ^b	.014	.164	-.020	-.004	.000	.027	1.000	
viii. Employees (ln)	.227	.407	.015	-.009	.045	.070	.037	1.000

Note. Control variables (region, industrial sector, ownership type) not reported here.

UNGC = UN Global Compact.

^aSee legends of Table 4 for detailed descriptions of the different local network strength measures.

^bAverage UNGC participation duration per sector of delisted firms.

(71%) reports to be at the Active level, whereas only a very small percentage (6%) declares an implementation of the UNGC at the Advanced level.

Table 1, part (b), is a correlation matrix for key variables included in this study.

Testing H1a

Models 1 to 6 displayed in Table 2 report the effect of the duration of participation on the—self-assessed—level of UNGC implementation. Models 1 to

Table 2. Results of Ordered (Probit) and Linear (OLS) Regression Analyses.

Level of UNGC implementation	Ordered probit			OLS		
	Model 1	Model 2 (region)	Model 3 (country)	Model 4	Model 5 (region)	Model 6 (country)
Duration of participation	0.034**	0.037***	0.051***	0.013**	0.014**	0.018***
Size (employees, ln)	0.086***	0.087***	0.106***	0.033***	0.033***	0.037***
Region ("Africa" omitted); country ("USA" omitted) ^a						
Asia		-0.124			-0.043	
Japan			0.401*			0.127*
Jordan			0.732*			0.245
Kazakhstan			0.750***			0.254**
Central America		-0.097			-0.028	
Eastern Europe		-0.207			-0.078	
Serbia			-0.855*			-0.329*
Slovakia			0.407*			0.130
Latin America		-0.105			-0.037	
Ecuador			1.222*			0.403*
Peru			0.389*			0.129*
MENA		0.379*			0.149*	
Syrian Arab Republic			0.934***			0.319***
Turkey			0.485*			0.166*
United Arab Emirates			0.764***			0.257***
North America		-0.087			-0.027	
Oceania		-0.183			-0.063	
Western Europe		-0.005			0.001	
France			-0.781***			-0.310***
Italy			0.631**			0.218*
Luxembourg			1.152*			0.396
Spain			0.814***			0.274***
Industrial sector ("Automobiles and parts" omitted) ^b						
Banks	0.474*	0.502*	0.366	0.181*	0.190*	0.124
Construction and materials	0.429*	0.456*	0.330	0.169*	0.178*	0.116
Utilities	0.600**	0.658**	0.704**	0.228**	0.248**	0.236**
Ownership type ("private company" omitted)						
Public company	0.186*	0.191*	0.204*	0.073**	0.075**	0.073*
State-owned company	-0.059	-0.047	-0.060	-0.021	-0.016	-0.018
Subsidiary	0.216	0.260*	0.276*	0.085	0.102*	0.103*
Intercept cut1	0.099	0.097	0.314			
Intercept cut2	2.588***	2.601***	3.044***			
Constant				1.490***	1.487***	1.426***
R ²				.073	.077	.156

(continued)

Table 2. (continued)

Ordered probit (and logit) model marginal effects and predicted probabilities

Dependent variable	Ordered probit marginal effects ^c for UNGC implementation level			Ordered logit marginal effects ^c for UNGC implementation level		
	Learner	Active	Advanced	Learner	Active	Advanced
Duration of participation	-.014***	.010***	.004***	-.013***	.010***	.003***
Employees (ln)	-.028***	.020***	.008***	-.026***	.020***	.007***
Further controls (country, industrial sector, ownership type) not reported here						
Predicted probabilities ^d	21.967	71.842	6.191	21.887	71.858	6.255
Actual frequencies ^d	23.620	70.716	5.664	23.620	70.716	5.664

Note. $N = 2,280$ (for all models). All coefficients are standardized β coefficients. OLS = ordinary least squares; UNGC = UN Global Compact; MENA = Middle East and North Africa.

^aOnly significant results with $N > 3$ in at least one model reported.

^bOnly significant results reported.

^cMarginal effects predicted at mean: Duration of participation = 3.843, employees (ln) = 6.895.

^dIn %.

* $p < .05$. ** $p < .01$. *** $p < .001$.

3 report the results of ordered probit regressions, Models 4 to 6 those of OLS regressions. While all six models control for firm size, industrial sector, and ownership type, they vary with regard to the consideration of geographic influences. Models 1 and 4 report the effect of UNGC participation duration across regional or country influences, whereas Models 2 and 5 (3 and 6) reflect the UNGC participation duration effect within regions (countries). Put differently, the models controlling for region (country) influences solely reflect the differences in implementation between younger and older participants within each region (country).

In all these models, “duration of participation” significantly and positively affects the “level of UNGC implementation.” Although appearing rather small in all models, this effect slightly increases when controlling for regional influences in Models 2 and 5, and for country influences in Models 3 and 6 compared with the effect across countries or regions (Models 1 and 4). Recalling that the β coefficients in the ordered probit regressions (Models 1 to 3) do not show the actual size of the effect, I further analyze the marginal effects in such models as depicted in Table 2. For example, we can see in the ordered probit model controlling for country influences that with each additional year of UNGC participation (centered at mean 3.843), the probability for a business participant classifying as Learner decreases by 1.4%, whereas the probabilities of classifying as Active or Advanced increase by 1.0% and 0.4% respectively.

Finally, the OLS model provides further indication that the size of the UNGC participation duration effect is rather small (β ranging between .013 [$p < .001$] in Model 4 and .018 [$p < .001$] in Model 6). We have to recall that the participation duration effect only reflects the “net” impact of the length of UNGC participation, that is, it excludes learning effects from sources outside the Global Compact. Moreover, the underlying data are cross-sectional and do not trace implementation levels over time. However, by restricting our analysis on time-period subsamples of our data set (not reported in a separate table due to constraints in scope), we can get a more detailed picture on the robustness or variability of the UNGC participation duration effect. To acknowledge for arguments stating that it might have been mainly industry leaders that joined the UNGC in the first place (Mwangi et al., 2013, p. 211), I first exclude companies having joined in 2000, the year of UNGC foundation. Rerunning the analysis performed in Model 6 now with this restricted participant base, the UNGC participation duration effect maintains its size and high significance ($\beta = .018$ [$p < .001$] same as in full sample, Model 6, at three decimal places), which speaks against the presence of a strong “first-joiner effect.”

Furthermore, restricting our analysis on the time period since the introduction of the two UNGC governance reforms in 2003 and 2005, the first introducing the COP policy and the latter formally classifying companies as “non-communicating” or “inactive” in case of noncompliance with the COP policy (Mwangi et al., 2013, p. 207), reveals additional interesting insights. Indeed, the size of the UNGC participation duration effect increases to $\beta = .019$ [$p < .001$] for the subsample including participants since 2003, and even further to $\beta = .026$ [$p < .001$] for the subsample of participants since 2005. In both cases, the effect remains highly significant. Finally, restricting our analysis solely on the period around the introduction of the “Differentiation Programme” (official introduction in 2011, but basic self-assessment of the coverage of all four UNGC issue areas in place already in 2010) yields insignificant results, whereas the direction of the effect seems to point into a surprising direction. The size of the participation duration effect decreases to almost zero when looking only at participants having joined the UNGC since 2009 ($\beta = .003$), and even becomes negative for the period since 2010 ($\beta = -.041$), respectively, 2011 being the most recent year considered in this study.

A locally weighted regression analysis, so-called “lowess smoothing” (see Cleveland, 1979), of duration of participation on UNGC implementation (Figure 2) illustrates that a “progressive implementation” effect seems to be present especially for the sample of companies having joined prior to 2010, that is, being participants for more than 2 years. However, Figure 2 also

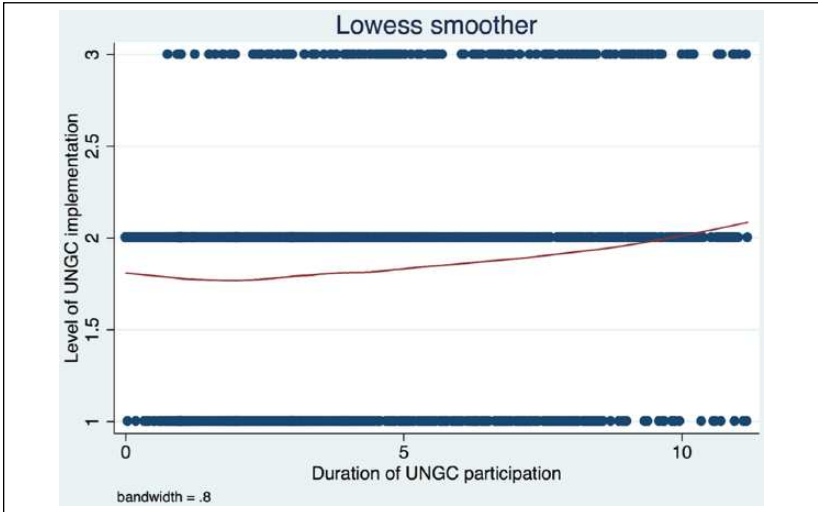


Figure 2. Level of UNGC differentiation by duration of UNGC participation.
Note. UNGC = UN Global Compact.

illustrates the previously identified negligent or even (insignificant) negative participation duration effect for the sample of companies having joined since 2010, the last 2 years considered in this study.

Finally, the results of the IV models, solving the potential selection effect of UNGC participation duration in the UNGC by assessing only its exogenous component, are presented in Table 3. The four IV model specifications controlling for country influences all yield positive and significant effects for UNGC participation duration on UNGC implementation. In the 2sls regression (Model 2), this effect is even larger ($\beta = .061$ [$p < .1$]) compared with the corresponding OLS regression without the IV (Model 6 in Table 2). In all three Heckman models, the size of the participation duration ($\beta = .017-.018$ [$ps < .001$]) effect remains similar to the OLS models in Table 2, and is still highly significant. Models 3 and 4 use maximum likelihood, Model 5 two-step estimation, Model 3 only includes the IV in the selection equation, and Models 4 and 5 include the variables participation duration, country, and supersector as well (excluding “ownership type” due to missing data in the data set of past UNGC participants). However, when controlling for geographic influences at the regional level (Model 2), the participation duration effect ($\beta = .052$) becomes insignificant ($p = .157$, $SE = 0.037$). Finally, the selection equations (not reported in Table 3) reveal a highly significant effect of the IV on the likelihood of the DV being observed.

Table 3. IV Analyses.

Level of UNGC implementation	2SLS		Heckman selection model		
	Model 1 (region)	Model 2 (country)	Model 3 ^a (ML)	Model 4 ^b (ML)	Model 5 ^b (two-step)
Duration of participation	.052	.061 [†]	.017***	.018***	.018***
Size (employees, ln)	.020	.022 [†]	.037***	.037***	.037***
Region ("Africa" omitted); country ("USA" omitted) ^c					
Asia	-.041				
India		-.197 [†]	-.107	-.108	-.108
Indonesia		-.326*	-.287*	-.318*	-.334**
Japan		.151*	.128 [†]	.191*	.224*
Jordan		.253*	.244	.291	.315
Kazakhstan		.253**	.248	.306	.334
Philippines		-.780*	-.537*	-.630*	-.679*
Central America	-.058				
Eastern Europe	-.084				
Russian Federation		-.533 [†]	-.569**	-.593**	-.606***
Serbia		-.327*	-.324*	-.282 [†]	-.258
Latin America	-.049				
Ecuador		.376 [†]	.405 [†]	.436*	.454*
MENA	.185*				
Syrian Arab Republic		.338***	.319**	.385**	.421**
Turkey		.182*	.165*	.158*	.155 [†]
United Arab Emirates		.288***	.260	.272	.279
North America	-.016				
Oceania	-.049				
Western Europe	-.007				
Denmark		.116 [†]	.105 [†]	.149*	.173*
France		-.357***	-.310***	-.307***	-.305***
Italy		.188*	.217**	.206*	.200*
Luxembourg		.463**	.395	.433	.453 [†]
Spain		.232***	.274***	.284***	.289***
Industrial sector (automobiles and parts omitted)					
Banks	.296*	.238 [†]	.137	.177	.205 [†]
Construction and materials	.228*	.170 [†]	.116	.117	.118
Health care	.189 [†]	.171 [†]	.118	.139 [†]	.147 [†]
Utilities	.251**	.237**	.237**	.272***	.289***
Ownership type ("private company" omitted)					
Public company	.033	.026	.073**	.073**	.073**

(continued)

Table 3. (continued)

Level of UNGC implementation	2SLS		Heckman selection model		
	Model 1 (region)	Model 2 (country)	Model 3 ^a (ML)	Model 4 ^b (ML)	Model 5 ^b (two-step)
State-owned company	.014	-.001	-.016	-.016	-.014
Subsidiary	.111*	.107*	.103*	.103*	.104*
R ²	.043	.116			
Athrho constant			.172	.156	
Lnsigma constant			-.780***	-.784***	
Mills lambda					.108
N	2,261	2,261	5,187	5,187	5,187

Note. All coefficients are standardized β coefficients. IV = instrumental variable; 2SLS = two-stage least squares; MENA = Middle East and North Africa; ML = maximum likelihood; UNGC = UN Global Compact.

^aOnly IV (average participation duration per sector of delisted firms) in selection equation.

^bIV and control variables (duration of participation, country, industrial sector) in selection equation.

^cOnly significant results at * $p < .05$ (or higher) with $N > 3$ in at least two models reported.

[†] $p < .1$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Overall, the findings across the great majority of analytical approaches and model specifications ascertain a significant positive effect of UNGC participation duration on UNGC implementation, and thus provide support for H1a.

Testing H1b

The results in Tables 4 and 5 provide detailed and partially surprising results on the role of local UNGC networks strength in the relationship between the duration of UNGC participation and the level of UNGC implementation. Models in Table 4 are based on linear (OLS) regression to provide a first overview of significant results across a wide range of local network strength measures. In Table 5, I then ran ordered probit analyses for the more relevant network measures identified in Table 4. This allows us to gain detailed insights into the marginal effects regarding the likelihood of implementing the UNGC at a particular level (Learner, Active, or Advanced) as reported in the bottom part of Table 5.

It is to note that there are two related effects of a third variable on the relationship between an independent variable and a DV—the one of a moderator and a mediator (R. M. Baron & Kenny, 1986). This study focuses

Table 4. Moderator Analyses of Local Network Strength—Linear (OLS) Models.

Local network strength	OLS					
	Model 1		Model 2		Model 3	
	Geography control variables		Region		Country	
	No		Region		No	Country
Composite measures						
Activities and best practice ^a	Duration of participation	.0107*	.0123**	.0178***	.00607	.0142**
	Moderator	.193***	.243***	.0870	.120***	.0489
	Interaction				.0208*	.0146†
Index 3 ^b	Duration of participation	.0120**	.0131**	.0178***	.00188	.0127*
	Moderator	.0648*	.0912**	-.329*	-.0163	-.363*
	Interaction				.0254*	.0120
Index 5 ^c	Duration of participation	.0120**	.0131**	.0178***	.00110	.00938
	Moderator	.0556†	.0725†	.272*	-.0227	.216
	Interaction				.0232*	.0171 (<i>p</i> = .116)
Quantitative measures						
Number of activities (in 2010)	Duration of participation	.0132**	.0141***	.0178***	.0178**	.0242**
	Moderator	-.00040	-.00052	.00128*	.00037	.00238*
	Interaction				-.00038	-.00065
Activities × Years ^d	Duration of participation	.0130**	.0139**	.0178***	.0113	.0142
	Moderator	-.00002	-.00004	.00025*	.00033	.00146***
	Interaction				-.00005	.00083

(continued)

Table 4. (continued)

Local network strength	OLS	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
		Geography control variables		Region		Country		No		Region		Country	
Qualitative measure													
Best practice ^a													
Duration of participation		.0130**		.0139**		.0178***		.00821†		.00954*		.0140**	
Moderator		.00908		.0101		.0870		-.0959*		-.0854*		.0242	
Interaction								.0317**		.0288*		.0245*	

Note. N = 2,280 (for all six models). All coefficients are standardized β coefficients. All models control for firm size, industrial sector, and ownership type (not reported here). OLS = ordinary least squares; UNGC = UN Global Compact.

^aLocal networks with above average number of activities in 2009 or 2010 and a best practice in 2010 (Italy, Spain, the United Kingdom, Germany, Paraguay, Serbia).

^bIndex with three equally weighted criteria: above average number of activities in 2009 (Argentina, Belarus, Bulgaria, China, France, Georgia, Italy, Japan, Serbia, Spain, Ukraine, and the United Kingdom), above average number of activities in 2010 (Argentina, Brazil, Chile, China, France, Germany, India, Italy, Japan, Paraguay, Russian Federation, Serbia, Spain, Ukraine), best practice; standardized (0-1).

^cIndex with five equally weighted criteria: above average number of activities in 2009, above average number of activities in 2010, best practice; established at least since 2004 (Argentina, Brazil, Bulgaria, Denmark, Egypt, Finland, France, Germany, Ghana, Iceland, Italy, India, Macedonia, Spain, Japan, Kenya, Malawi, Mauritius, Mozambique, Nepal, Norway, Panama, Peru, Philippines, Poland, Sweden, Turkey, the United Kingdom), strong local networks as identified by UNGC expert (Argentina, Germany, France, Spain, Nordic, that is, Denmark, Finland, Greenland, Iceland, Norway, Sweden); standardized (0-1).

^dAverage number of activities in 2009 and 2010 \times Years of existence.

^eBest practice identified in UNGC Local Network Report referring to data of 2010 (Colombia, Germany, Indonesia, Italy, Kenya, Republic of Korea, Moldova, Namibia, Netherlands, Paraguay, Serbia, Spain, Sri Lanka, United Kingdom, Vietnam).

†p < .10. *p < .05. **p < .01. ***p < .001.

Table 5. Moderator Analyses of Local Network Strength—Ordered Probit Models.

Local network strength	Ordered probit		Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
	Geography control variables		No		Region		Country		No		Region		Country	
Composite measures Activities and best practice ^a	Duration of participation		0.0290**		0.0334**		0.0515***		0.0171		0.0226†		0.0410**	
	Moderator		0.507***		0.625***		-0.166		0.309***		0.447***		-0.341	
	Interaction								0.0554*		0.0497*		0.0432†	
	Duration of participation		0.0317**		0.0345**		0.0515***		0.00560		0.0136		0.0376*	
Index 3 ^b	Moderator		0.174*		0.240**		-0.869		-0.0369		0.0723		-0.999	
	Interaction								0.0656**		0.0522*		0.0330	
	Duration of participation		0.0315**		0.0345**		0.0515***		0.00376		0.0113		0.0283	
	Moderator		0.152*		0.194†		-1.449		-0.0493		0.0218		-1.752	
Qualitative measure Best practice ^d	Interaction								0.0593*		0.0494†		0.0473 (p = .110)	
	Duration of participation		0.0343**		0.0369***		0.0515***		0.0223†		0.0260*		0.0408**	
	Moderator		0.0242		0.0267		-0.290		-0.243*		-0.216*		-0.384	
	Interaction								0.0795**		0.0724*		0.0674*	

(continued)

Table 5. (continued)

Ordered probit marginal effects		Ordered probit marginal effects for UNGC implementation level			Ordered probit marginal effects for UNGC implementation level		
Dependent variable	Learner		Active		Learner		Advanced
	Region	Country	Region	Country	Region	Country	
Geography control							
Composite measures							
Duration of participation	-.006†		.004†		.002†		.003***
Activities and best practice ^a	-.124***		.082***		.041***		-.026
Interaction	-.014*		.009*		.005*		.003†
Duration of participation	-.004		.003		.001		.003*
Index 3 ^b	-.020		.013		.007		-.075
Interaction	-.015		.010		.005		.002
Duration of participation	-.003		.002		.001		.002 (p = .145)
Index 5 ^c	-.006		.004		.002		-.132
Interaction	-.014†		.009†		.005†		.004 (p = .113)
Qualitative measure							
Duration of participation	-.007*		.005*		.003*		.003***
Best practice ^d	.061*		-.040*		-.021*		-.029
Interaction	-.020*		.013*		.007*		.005*

Note. N = 2,280 (for all models). All coefficients are standardized β coefficients. All models control for firm size, industrial sector and ownership type (not reported here).
^aLocal networks with above average number of activities in 2009 or 2010 and a best practice in 2010 (Italy, Spain, the United Kingdom, Germany, Paraguay, Serbia).
^bIndex with three equally weighted criteria: above average number of activities in 2009 (Argentina, Belarus, Bulgaria, China, France, Georgia, Italy, Japan, Serbia, Spain, Ukraine, and the United Kingdom), above average number of activities in 2010 (Argentina, Brazil, Chile, China, France, Germany, India, Italy, Japan, Paraguay, Russian Federation, Serbia, Spain, Ukraine), best practice: standardized (0-1).
^cIndex with five equally weighted criteria: above average number of activities in 2009, above average number of activities in 2010, best practice: established at least since 2004 (Argentina, Brazil, Bulgaria, Denmark, Egypt, Finland, France, Germany, Ghana, Iceland, Italy, India, Macedonia, Spain, Japan, Kenya, Malawi, Mauritius, Mozambique, Nepal, Norway, Panama, Peru, Philippines, Poland, Sweden, Turkey, the United Kingdom), strong local networks as identified by UNGC expert (Argentina, Germany, France, Spain, Nordic, that is, Denmark, Finland, Greenland, Iceland, Norway, Sweden), standardized (0-1).
^dBest practice identified in UNGC Local Network Report referring to data of 2010 (Colombia, Germany, Indonesia, Italy, Kenya, Republic of Korea, Moldova, Namibia, Netherlands, Paraguay, Serbia, Spain, Sri Lanka, United Kingdom, Vietnam).
†p < .10. *p < .05. **p < .01. ***p < .001.

exclusively on the moderator analysis for two reasons. First, whereas mediators explain more generally how or why a certain effect between two variables occurs, moderators specify when (i.e., under which conditions) certain effects will hold (R. M. Baron & Kenny, 1986, p. 1176). The latter seems to respond more directly to this study's key mission to assess the impact of the UNGC and the effectiveness of certain UNGC learning mechanisms. Second, a mediator analysis assumes that the key independent variable (UNGC participation duration) is causally antecedent to the intervening variable (local network strength; R. M. Baron & Kenny, 1986, p. 1174). This would neglect the similarly plausible assumption that strong local UNGC networks may also affect the duration of UNGC participation. The moderator analysis avoids such restricting assumptions between the two variables, and puts them instead at the same level in regard to their relation with the DV (level of UNGC implementation).

To test for moderation, in addition to regressing the independent variable on the DV (see Table 2), the moderator variable (local network strength) is included in the regression (Tables 4 and 5, Models 1-3). Finally, an interaction of the independent and moderator variable is added to the regression (Tables 4 and 5, Models 4-6). The interaction effect is most easily interpretable when the moderator is a dichotomous (0/1) variable (first and last local network strength measure in Tables 4 and 5). In this case, the interaction coefficient directly reports the additional effect of participation duration on level of UNGC implementation for participants from strong local network countries compared with the remaining countries (see Table 4 and ordered probit marginal effects in Table 5). In contrast, if the moderator is a continuous variable (other local network measures in Tables 4 and 5), the interpretation of the moderator effect is less obvious and requires caution, as we would have to take into account "a priori how the effect of the independent variable varies as a function of the moderator" (see R. M. Baron & Kenny, 1986, p. 1175).

In both the OLS and ordered probit models, the composite measures of local network strength in the regressions without the interaction term (Models 1-3 of Tables 4 and 5) almost unequivocally suggest that strong local networks—as well as participation duration—have a positive effect on the level of UNGC implementation (β ranging between .0556 [$p < .1$] and .243 [$p < .001$] in the OLS and between .194 [$p < .1$] and .625 [$p < .001$] in the ordered probit Models 1 and 2). Only when including country controls, which may lead to various dependencies with the local network measures explained above, the local network effect becomes ambiguous (Model 3 of Tables 4 and 5). Now including the interaction term, Models 4 to 6 reveal that the composite local network measures not only have a positive effect on the level of

UNGC implementation but also that this strong local network effect is stronger for older business participants compared with newer ones from the remaining countries: β ranges between .0184 [$p < .05$] and .0254 [$p < .05$] in the OLS and between .0494 [$p < .1$] and .0656 [$p < .01$] in the ordered probit Models 4 and 5. More precisely, the ordered probit marginal effects analysis suggests that older participants from strong local networks are about 1.4% less likely to classify as Learner, and instead 0.9% (0.5%) more likely to classify as Active (Advanced); note that effects are not always significant across the different network measures and slightly smaller when controlling for country instead of regional influences (see composite measures in Table 5). Although the results of Model 6 tend to support the previous findings (although effects are not always significant), again these regressions including country controls need to be interpreted with caution.

Finally, an analysis of single criteria for measuring local network strength reveals even more detailed insights: Most of the moderator and interaction coefficients capturing quantitative aspects of local networks are insignificant. Only Models 3 and 6 (Table 4) controlling for country influences (potentially inheriting unobservable interdependencies with the moderator) report a significant positive moderator effect as found in previous regressions. However, looking at the key qualitative aspect of assessing local network strength, that is best practices by local networks, reveals further and partially surprising insights: The effect of this variable is only significant when taking into account the participation duration of its business members. More precisely, this qualitative “Best Practice” local networks measure does not have a significant effect across all (new and old) UNGC participants in the countries of these networks. In contrast, the interaction terms—ranging between .0245 [$p < .05$] and .0317 [$p < .01$] in the OLS case and between .0674 [$p < .05$] and .0795 [$p < .01$] in the ordered probit case—suggest that these “Best Practice” networks only affect the level of UNGC implementation over the duration of participation. In other words, this measure predominantly stimulates the UNGC implementation of the older participants. A look into the marginal effects of the ordered probit models (Table 5) specifies that older participants from countries with high quality networks are 1.3% or 0.7% more likely to implement the UNGC at the Active or Advanced level, respectively, compared with newer participants from the remaining countries.

Overall, the results stemming from multiple measures of local network strength and different analytical approaches provide detailed evidence for the influential moderating role of local network strength in the relationship between participation duration and level of UNGC implementation, thus lending support for H1b.

Discussion and Conclusion

This study focuses on the largest voluntary CSR initiative worldwide, the UNGC. Its purpose is to enrich our knowledge of the impact of such initiative on the business participants' implementation of the initiative's principles. Consequently, this study addresses the following research question: Does longer UNGC participation duration lead to higher levels of UNGC implementation? As outlined below, my findings contribute not only to the literatures on the UNGC and voluntary CSR initiatives in general, but also enrich our knowledge on learning in and by interorganizational networks over time. In addition, I provide theoretical and empirical insights on the validity of the new "Differentiation Programme" measure.

UNGC Participation Duration

Although critics have strongly questioned that voluntary CSR initiatives such as the UNGC are able to induce their signatory companies to enhance their CSR efforts (Behnam & MacLean, 2011; Deva, 2006; Sethi & Schepers, 2014), my findings suggest that such initiatives may indeed impact organizational practices. Overall, I found the level of UNGC implementation to be higher for longer UNGC participants than for newer ones. This suggests that UNGC participation duration has a positive, albeit moderate, effect on the level of UNGC implementation. The present study thereby contributes to the few existing quantitative studies about the impact of the UNGC over the time of participation (Berliner & Prakash, 2015; McKinsey, 2007; UNGC, 2011b). It adds to the study of Berliner and Prakash (2015), which suggests that CSR ratings of UNGC participants increase over time. Whereas their study is based on U.S. firms and focuses on environmental and human rights issues exclusively, this study extends our knowledge by looking at business participants worldwide and the whole set of UNGC principles. Furthermore, this study adds to practitioner studies, which had to rely on non-criteria-based perceptions. In the 2010 UNGC implementation survey, only 16% (5%) of the business participant respondents stated that the UNGC has a minimal (no) impact on CSR policies and practices. The vast majority (79%), however, assessed at least a moderate impact on such behavior (UNGC, 2011b, p. 16). The UNGC study by McKinsey (2007, p. 18) reported similar findings: 59% of respondents, which were CEOs of companies participating in the Global Compact, replied that they had incorporated environmental, social, and governance issues into core strategy "much more" than 5 years ago.

Here, I assess the "net" impact of UNGC participation focusing on the UNGC learning and networking mechanisms exclusively available to UNGC

participants by drawing upon the objectively observable measure duration of participation. My findings across all different types and specifications of analytical models, including IV approaches, suggest that the duration of UNGC participation has a much lower impact on the level of UNGC implementation (marginal effects in the ordered logit and probit models around 1%; OLS coefficient $\beta < .02$) than the McKinsey (2007) study and the UNGC (2011b) implementation survey suggest. In this respect, we may need to scale down the very optimistic expectations regarding the UNGC's impact on its business participants' CSR-related behavior that appear in previous studies. To obtain a better picture on the UNGC "net" impact in future surveys, the UNGC could add questions controlling for the impact of other CSR initiatives (Rasche et al., 2013).

Moreover, my findings provide additional insights on the effect of "first joiners" as well as the various governance reforms by looking at time-period subsamples. On one hand, the UNGC participation duration effect remains unchanged when controlling for the argument that industry leaders are particularly likely to join the UNGC in the first place (Mwangi et al., 2013). On the other hand, this effect becomes larger when restricting the analysis to the time period since the refinement of the UNGC accountability structure through the 2003 introduction of the COP policy and 2005 introduction of "company delistings" (Mwangi et al., 2013). This finding provides initial evidence that these reforms further increased the impact of the UNGC on its business participants, and allows first inferences on the conditions under which refined accountability structures in voluntary CSR programs can achieve intended ends (Behnam & MacLean, 2011; Berliner & Prakash, 2015). Several studies about the essence and design of global voluntary CSR initiatives tended to restrict their analysis to a static perspective, that is, they focused on the accountability and performance-related aspects of a standard at a given point in time.

Such a perspective led Deva (2006) to criticize the UNGC principles as being too vague and thus hard to implement, or Behnam and MacLean (2011) to conclude that the UNGC invites participants to decouple actual practices from formal principles. This understanding may focus too much on the performance of standards, for example, by comparing nonadopters with adopters (often neglecting the duration of participation; King & Toffel, 2007; Wijen, 2014). According to this view, standards "need to be designed and implemented in such a way that adopters will substantively comply with standard requirements" (Wijen, 2014, p. 306; D. P. Baron & Lyon, 2012; Campbell, 2007; King & McDonnell, 2012). In contrast, this study suggests that voluntary global standards may have a much more developmental character than critics applying a static performance perspective on standards suggest. Only

once the UNGC has existed for several years, has expanded its range of CSR issues, and has gathered a substantial participant base, the UNGC gradually refined its accountability mechanisms, which then—under these particular conditions—has further increased its impact on participants. In sum, it appears reasonable to conclude that implementation criteria and exact goals do not have to be fully defined *ex ante* yet may be continuously adjusted and refined along the way (Haack, Schoeneborn, & Wickert, 2012; Schembera, Haack, & Scherer, 2015).

Strong Local UNGC Networks

The above analysis lent general support to arguments of learning and stakeholder engagement effects across local UNGC networks (Burnes, 2004; Campbell, 2007; Kell & Levin, 2003). Results from moderator analyses provided more comprehensive insights on the role of strong local UNGC networks. Applying composite quantitative and qualitative measures of local network strengths, the presence of strong local UNGC networks has a significant positive effect on the level of UNGC implementation across all business participants in these countries, regardless of their duration of participation, which is in line with previous theoretical arguments (Mwangi et al., 2013; Rasche, 2012; Vormedal, 2005). However, a progressive effect on the level of UNGC implementation over the duration of participation is only present when applying a local network measure that focuses on the quality rather than quantity of network activities.

These differential insights contribute importantly to recent UNGC studies that have distinguished between costly and more superficial activities (Berliner & Prakash, 2015), assuming that time is closely related to costs. Whereas Berliner and Prakash (2015) found that UNGC participants fare worse than nonparticipants on costly performance dimensions, the results of this study specify that the type of activities pursued by a certain UNGC network may influence whether its business participants take into account more costly, time-consuming activities. The results suggesting that local networks focusing on a large quantity of activities do not affect older participants in a significantly different manner compared with newer ones may imply that many business participants in the countries of these local networks focus on assessment criteria of UNGC implementation that can be implemented in a short period of time. Conversely, we may conclude from the fact that local networks known for best practices, high quality activities, affect older participants significantly more than newer ones, that business participants in those countries also take into account more time-consuming, or costly/substantial, criteria. These findings also contribute to the interorganizational network

literature, which has suggested positive effects in networks with long-term orientation and high learning stakes (Crossan et al., 1999; Larsson et al., 1998), arguably more likely to be present in high quality local networks. However, findings derived from high quantity local networks may point toward existing learning barriers such as opportunism and/or asymmetry in learning activities (Hamel, 1991; Larsson et al., 1998).

Future studies on voluntary CSR initiatives should further investigate the relationship and dynamics of learning in and by interorganizational networks (Knight, 2002) to shed light on the interaction of network activity and quality on one hand, and the type of implemented UNGC practices of business participants on the other. For example, future studies may categorize the Advanced criteria of UNGC implementation depending on the expected cost needed to implement the criteria and analyze the determinant of each category. Furthermore, future research should study dynamic processes at networks over time, scrutinizing whether learning not only occurs at the level of the organization but also of the network as a whole (Knight, 2002; Larsson et al., 1998). For example, a focus can be put on the suggested necessity of achieving a “critical mass” of participants to promote global CSR practices (Barkemeyer & Napolitano, 2009; Haack et al., 2012; Kell, 2005). This may reveal whether voluntary CSR initiatives first need to be concerned with building up a large group of participants by keeping the implementation criteria low, and only thereafter a tightening of criteria and progress among participants can be expected (Christensen, Morsing, & Thyssen, 2013; Haack et al., 2012).

With regard to mechanisms of UNGC implementation, we should recall that this study’s focus is on learning and networking mechanisms allowing us to get insights into the “net” impact of the UNGC. A variety of other CSR implementation mechanisms may exist. To a certain extent, learning and networking mechanisms may also lead to increased prioritization by top management, for example, if the firm commitment during these stakeholder sessions generates heightened societal expectations and pressure (see Haack et al., 2012). However, future studies may investigate more thoroughly how societal pressure, for example, intense media exposure (Wartick, 1992), influences a firm’s level of UNGC implementation. Even more, a number of mechanisms driving the level of UNGC implementation may exist that are fully unrelated to the UNGC’s learning and networking approach and were hence excluded in this study. Most notably, firm-specific critical events such as ethical transgressions have been identified as important drivers for CSR implementation (Chandler, 2014; Gebhardt & Müller-Seitz, 2011). In addition, a firm’s participation in other CSR initiatives, or global CSR trends in general, can influence the level of UNGC implementation (see also Potoski

& Prakash, 2005, p. 247). For this study's purpose, I assume that such external mechanisms affect younger and older UNGC participants similarly, while statistical controls (country/region, industrial sector) may also partly address these concerns. However, longitudinal future research may try to fully take into account the possibility that older UNGC participants are also substantially more likely to be member of other CSR initiatives compared with younger UNGC participants through a mix of qualitative and quantitative analyses (see Rasche et al., 2013, p. 22). Finally, future research may also consider to what extent the UNGC could impact businesses even beyond its participant base, for example, when professional CSR consultants use the UNGC as a template for their company-tailored advice.

The New "Differentiation Programme"

I discussed the validity of the UNGC "Differentiation Programme" by consulting academic assessment models (Baumann-Pauly & Scherer, 2013; Behnam & MacLean, 2011) as well as empirical data on sustainability compiled by independent third parties (RobeccoSAM and BHP Brugger und Partners). As regards content, the UNGC "Differentiation Programme" displays—in most regards—a good fit with the academic corporate citizenship assessment tool of Baumann-Pauly and Scherer (2013). However, my analysis revealed certain "loopholes" in the former, namely an insufficient integration of three central elements of UNGC implementation: "alignment of incentive structures," "provision of training," and "installation of a complaints procedure." To further increase the impact of the initiative, these "loopholes" should be closed by obliging participants aiming for the GC Advanced level to incorporate these three CSR elements in all four UNGC issue areas.

Regarding the risk of bluwashing (or decoupling) in the UNGC, recent developments such as the introduction of the "Differentiation Programme" or public "delistings" as part of the COP policy constitute improvements of the UNGC's accountability structure and suggest an updated analysis of the former application of decoupling characteristics to the UNGC by Behnam and MacLean (2011). Furthermore, comparisons of the self-assessed UNGC data with third-party assessments did not indicate that the findings in this study might be crucially distorted by the presence of "decoupling" or social desirability bias.

Finally, the finding that participants having joined the UNGC since the launch of the Differentiation Programme around 2010/2011 display slightly higher levels of UNGC implementation compared with firms having joined shortly before its launch (see Figure 2) calls for further investigations. Future research may examine whether this program has led to shifting motivations

for UNGC participation and assess implementation progress, for example, from Active to Advanced, over time. Arguably, the opportunity to select an Advanced level of UNGC implementation had positive effects on the perceived legitimacy of the initiative and now increasingly attracts (again?) companies that have already achieved high CSR performance and are now able to differentiate themselves from lower CSR performers in the UNGC.

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Note

1. A total of 4,150 "Communications on Progress" (COPs) were submitted in 2011 (UNGC, 2012c). Before eliminating incomplete data, most notably as regards company ownership type, the data set comprised 2,807 company COPs. Note that the number of submitted COPs may be significantly lower than the number of UNGC participants considering that a considerable part of participants did not submit a COP in time ("noncommunicating" = 23%), were expelled (963) or newly entered (1,861) in 2011.

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